

REMARKS

Examiner Walter Lee Lindsay, Jr. is thanked for the thorough examination and search of the subject of the patent application. Claims **1, 6, 7, 11, 14, 17, 19, and 22** have been amended to point out the significant differences between the patents cited by the examiner and the current application and thereby overcome the Examiner's rejection. Phrase, "sub-melt regime", has been added to claims **1, 6, 11, and 17** and phrase, "so as to not melt said pre-amorphized implant layer", has been added to claims **7, 14, 19, and 22**.

Reconsideration of the rejection of claims **1 – 7, 10 – 13, 16 – 18, and 21** under 35 U.S.C. 102 as being anticipated by Chong et.al. (U.S. Patent No. 6,335,253), reconsideration of the rejection of claims **8, 14, 19, 22 – 24, and 26** under 35 U.S.C. 103(a) as being unpatentable over Chong et.al. (U.S. Patent No. 6,335,253) in view of Yamazaki et.al. (U.S. Patent No. 6,423,586), and reconsideration of the rejection of claims **9, 15, 20, and 25** under 35 U.S.C. 103(a) as being unpatentable over Chong et.al. (U.S. Patent No. 6,335,253) in view of Yamazaki et.al. and further in view of Talwar et.al. (U.S. Patent No. 5,908,307) are requested based on the following significant differences between the patents of Chong et.al., Yamazaki et.al., and Talwar et.al. and the invention of the current application:

US Patent 6,335,253 states,*Referring to Fig. 12, an important feature of the present invention is illustrated. The semiconductor substrate 10 is irradiated with laser light 78. This irradiation causes the silicon in the amorphous layer 38 and 42 to meltThe laser irradiation also causes the silicon in the amorphous layer 34 of the gate to melt....The laser light fluence is carefully controlled so that the temperature of the silicon only rises sufficiently to melt the amor-*

phous layer 38 and 42 in the silicon.....

US Patent 6,423,586 states,*a high carrier mobility can be obtained by optimally controlling the laser conditions such as wavelength and intensity, so that melting and recrystallization may occur on the film. To sufficiently effect melting of the film, the laser-irradiated portion should be maintained at a temperature not lower than the melting point of the semiconductor under process for a long duration.....*

US Patent 5,908,307 states,*Then at least a portion of the given amorphized surface layer of the silicon is temporarily heated for a certain time to a temperature which is sufficient to melt amorphized siliconThe irradiating energy of each of the successive pulses is sufficient to cause melting of an amorphized silicon spot*

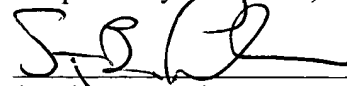
All three cited patents by the examiner require the use of melting an amorphous silicon layer in the laser processing. In the technique proposed the current application, the laser processing used is in the sub-melt regime of the amorphous silicon layer. The use of multiple-pulse laser annealing in the sub-melt temperature regime serves to activate the dopants (thereby reducing sheet resistance). Due to short annealing time and the absence of melting, there is negligible widening of the dopant profile. A subsequent RTA serves to repair the ion implantation damage.

Claims 1, 6, 7, 11, 14, 17, 19, and 22 have been amended to clarify the invention and to overcome the Examiner's rejection. All the claims are now believed to be in condition for allow-

ance and allowance is so requested.

It is requested that should there be any problem with this Amendment, please call the undersigned Attorney at (845) 452-5863.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'S. B. Ackerman', written over a horizontal line.

Stephen B. Ackerman, Reg. No. 37, 761